

ABSTRACT

1 A memory device having a cross point array of memory cells includes a
2 temperature sensor and a reference memory cell. The temperature sensor senses the
3 temperature of the memory device and data from the temperature sensor and the reference
4 memory cell are used to update write currents used to program the array of memory cells.
5 A method of calibrating the memory device involves detecting a temperature of the
6 memory device, determining whether the temperature of the memory device has changed
7 by a threshold value, and updating write current values if the temperature of the memory
8 device changes by the threshold value. The write current values can be updated by data
9 from the reference memory cell, or from write current values stored in a lookup table.